

IN THE CLAIMS

Please cancel claims 1-6, 9, 26-30, 49 and 50, and amend the claims as follows:

1-6. (Cancelled).

7. (Currently Amended) ~~The data processing device of claim 6A~~
data processing device comprising:

at least one input for receiving data including

viewer profile data; and

5 data regarding a television program;

a medium readable by the data processing device coupled to
the input, said medium storing said viewer profile data; and

a processor, the processor being adapted to perform the
following:

10 calculating a probability that the television program is a
desired one; and

supplying a recommendation regarding the television
program based on the probability,

wherein the processor maintains the viewer profile in accordance

15 with a data structure comprising:

a list of feature values; and

for each element of the list, a respective number of times
programs having that feature value were watched, and a respective

number of times programs having that feature value were not
20 watched,

and wherein the processor is further arranged to perform the
following, each time a user watches a new program,

Ø first adding, to the list, feature values or counts of
such feature values, associated with that new program;

25 Ø selecting at least one companion program to the new
program, the companion program being selected at random from a
program schedule, which companion program has not been watched; and

Ø second adding, to the list, feature values of the
companion program, or counts of such feature values.

8. (Currently Amended) The data processing device of claim 57,
wherein the processor is further arranged to perform the following,
each time a user watches a new program: first adding, to the list,
feature values or counts of such feature values, associated with
5 that new program7.

9. (Cancelled).

10. (Currently Amended) The data processing device of claim 17,
wherein the input is a network connection.

11. (Currently Amended) The data processing device of claim 17, wherein calculating comprises using a Bayesian classifier.

12. (Original) The data processing device of claim 11, wherein the processor is further adapted to subject the viewer profile to a noise threshold calculation prior to using the Bayesian classifier.

13. (Currently Amended) ~~The data processing device of claim 12A~~ data processing device comprising:

at least one input for receiving data including

viewer profile data; and

5 data regarding a television program; and

a processor, the processor being adapted to perform the following:

calculating, using a Bayesian classifier, a probability that the television program is a desired one; and

10 supplying a recommendation regarding the television program based on the probability,

wherein the processor is further adapted to subject the viewer profile to a noise threshold calculation prior to using the Bayesian classifier,

15 and wherein

Ø the viewer profile data comprises

Ø a list of feature values;

Ø a respective negative count for each element of the list,
the negative count indicating a number of times programs having
20 that feature value have not been watched;
Ø a respective positive count for each element of the list,
the positive count indicating a number of times programs having
that feature value have been watched;
Ø the noise threshold calculation comprises
25 Ø selecting a sub-list comprising at least feature values
having at least one specific type of feature;
Ø choosing the highest negative count in the sub-list as the
noise threshold;
the recommendation comprises a program selected from a group having
30 at least one feature value having a positive or negative count in
the viewer profile, which count exceeds the noise threshold.

14. (Currently Amended) ~~The data processing device of claim~~
~~12,~~A data processing device comprising:

at least one input for receiving data including
viewer profile data; and
5 data regarding a television program; and
a processor, the processor being adapted to perform the
following:
calculating, using a Bayesian classifier, a probability
that the television program is a desired one; and

- 10 supplying a recommendation regarding the television
program based on the probability,
wherein the processor is further adapted to subject the viewer
profile to a noise threshold calculation prior to using the
Bayesian classifier,
- 15 and wherein subjecting the viewer profile to the noise threshold
further comprises using observations gathered by a known random
process to estimate a reasonable noise threshold.

15. (Original) The data processing device of claim 13, wherein
the specific type comprises a day and time of day feature type.

16. (Original) The data processing device of claim 13, wherein
the specific type comprises a station identification feature type.

17. (Currently Amended) The data processing device of claim
~~13~~, wherein the viewer profile data comprises a plurality of
respective counts of programs watched, each respective count
indicating how many programs watched had a respective feature.

18. (Original) The data processing device of claim 17, wherein
calculating comprises calculating a probability that the television
program is in a particular class.

19. (Currently Amended) The data processing device of claim 18,
wherein the class is one of

- Ø programs the viewer is interested in, and
- Ø programs the viewer is not interested in.

20. (Currently Amended) ~~The data processing device of claim 1A~~
data processing device comprising:

at least one input for receiving data including
viewer profile data; and

5 data regarding a television program; and

a processor, the processor being adapted to perform the
following:

calculating a probability that the television program is a
desired one; and

10 supplying a recommendation regarding the television
program based on the probability,

wherein calculating the probability comprises:

- computing a prior possibility, of whether a program is
desired or not;
- 15 - computing a conditional probability of whether a feature
fi will be present if a show is desired or not; and
- computing a posterior probability of whether program is
desired or not, based on the conditional probability and the prior
probability.

21. (Currently Amended) The data processing device of claim 120, wherein it is assumed that programs watched are programs that the viewer is interested in.

22. (Currently Amended) The data processing device of claim 120, wherein the processor is further adapted to provide a recommendation regarding an additional item, other than a television program, based on the viewer profile.

23. (Currently Amended) ~~The data processing device of claim 1A~~
data processing device comprising:

at least one input for receiving data including

viewer profile data; and

5 data regarding a television program; and

a processor, the processor being adapted to perform the following:

calculating a probability that the television program is a desired one; and

10 supplying a recommendation regarding the television program based on the probability,

wherein the processor is further adapted to occasionally recommend a surprise show that has relatively few features in common with watched shows.

24. (Currently Amended) ~~The data processing device of claim 1A~~
data processing device comprising:

at least one input for receiving data including
viewer profile data; and

5 data regarding a television program; and

a processor, the processor being adapted to perform the
following:

calculating a probability that the television program is a
desired one; and

10 supplying a recommendation regarding the television
program based on the probability,

wherein

Ø the viewer profile comprises a list of features types and
values for such feature types;

15 Ø the feature types are selected from at least two sets,
including

Ø a first set of feature types whose values are deemed non-
independent; and

Ø a second set of feature types whose values are deemed
20 independent; and

Ø calculating a probability comprises

Ø applying a Bayesian classifier calculation corresponding
to feature types from the second set; and

Ø applying a modified Bayesian classifier calculation
25 corresponding to feature types from the first set.

25. (Currently Amended) The data processing device of claim
24, wherein

Ø with respect to features of the first set, the modified
Bayesian classifier calculation considers only feature values that
5 match with a show being classified.

26-30. (Cancelled).

31. (Currently Amended) ~~The at least one medium of claim 30~~At
least one medium readable by a data processing device and embodying
software arranged to perform the following operations:

_____ calculating a probability that a television program is a
5 desired one, based on a viewer profile and data regarding the
television program; and

_____ supplying a recommendation regarding the television
program based on the probability,

wherein the at least one medium further embodies the viewer
10 profile, the viewer profile being embodied as a data structure
comprising:

_____ a list of feature values; and

for each element of the list, a respective number of times
programs having that feature value were watched,

15 and wherein the software is further arranged to perform the
following, each time a user watches a new program,

Ø first adding, to the list, feature values or counts of
such feature values, associated with that new program;

Ø selecting at least one companion program to the new
20 program, the companion program being selected at random from a
program schedule, which companion program has not been watched; and

Ø second adding, to the list, feature values of the
companion program, or counts of such feature values.

32. (Currently Amended) The at least one medium of claim 2931,
wherein the software is further arranged to perform the following,
each time a user watches a new program: first adding, to the list,
feature values or counts of such feature values, associated with
5 that new program.

33. (Currently Amended) The at least one medium of claim 2631,
wherein the at least one medium embodies the data regarding the
television program.

34. (Currently Amended) The at least one medium of claim 2631,
wherein calculating comprises using a Bayesian classifier.

35. (Original) The at least one medium of claim 34, wherein the software is further adapted to subject the viewer profile to a noise threshold calculation prior to using the Bayesian classifier.

36. (Currently Amended) ~~The at least one medium of claim 35~~At least one medium readable by a data processing device and embodying software arranged to perform the following operations:

calculating, using a Bayesian classifier, a probability

5 that a television program is a desired one, based on a viewer profile and data regarding the television program; and

supplying a recommendation regarding the television program based on the probability,

wherein the software is further adapted to subject the viewer

10 profile to a noise threshold calculation prior to using the Bayesian classifier,

and wherein

Ø the viewer profile data comprises

Ø a list of feature values;

15 Ø a respective negative count for each element of the list, the negative count indicating a number of times programs having that feature value have not been watched;

Ø a respective positive count for each element of the list,
the positive count indicating a number of times programs having
20 that feature value have been watched;
Ø the noise threshold calculation comprises
Ø selecting a sub-list comprising at least feature values
having at least one specific type of feature;
Ø choosing the highest negative count in the sub-list as the
25 noise threshold;
Ø the recommendation comprises a program selected from a
group having at least one feature value having a positive or
negative count in the viewer profile exceeding the noise threshold.

37. (Currently Amended) ~~The data processing device of claim~~
35 At least one medium readable by a data processing device and
embodying software arranged to perform the following operations:
calculating, using a Bayesian classifier, a probability
5 that a television program is a desired one, based on a viewer
profile and data regarding the television program; and
supplying a recommendation regarding the television
program based on the probability,
wherein the software is further adapted to subject the viewer
10 profile to a noise threshold calculation prior to using the
Bayesian classifier,

and, wherein subjecting the viewer profile to the noise threshold further comprises using observations gathered by a known random process to estimate a reasonable noise threshold.

38. (Original) The at least one medium of claim 36, wherein the specific type comprises a day and time of day feature type.

39. (Original) The at least one medium of claim 36, wherein the specific type comprises a station identification feature type.

40. (Currently Amended) The at least one medium of claim ~~26~~36, wherein the viewer profile data comprises a plurality of respective counts of programs watched, each respective count indicating how many programs watched had a respective feature.

41. (Original) The at least one medium of claim 40, wherein calculating comprises calculating a probability that the television program is in a particular class.

42. (Original) The at least one medium of claim 40, wherein the class comprises at least one of programs the viewer is interested in and programs the viewer is not interested in.

43. (Currently Amended) ~~The at least one medium of claim 26~~At least one medium readable by a data processing device and embodying software arranged to perform the following operations:

calculating a probability that a television program is a
5 desired one, based on a viewer profile and data regarding the
television program; and

supplying a recommendation regarding the television
program based on the probability,

wherein calculating the probability comprises:

- 10 - computing a prior possibility, of whether a program is
desired or not;
- computing a conditional probability of whether a feature
fi will be present if a show is desired; and
- computing a posterior probability of whether program is
15 desired or not, based on the conditional probability and the prior
probability.

44. (Currently Amended) The at least one medium of claim 2643,
wherein it is assumed that programs watched are programs that the
viewer is interested in.

45. (Currently Amended) The at least one medium of claim 2643,
wherein the software is further arranged to provide a

recommendation regarding an additional item, other than a television program, based on the viewer profile.

46. (Currently Amended) ~~The at least one medium of claim 26~~At least one medium readable by a data processing device and embodying software arranged to perform the following operations:

calculating a probability that a television program is a
5 desired one, based on a viewer profile and data regarding the
television program; and

supplying a recommendation regarding the television
program based on the probability,

wherein the software is further arranged to occasionally recommend
10 a surprise show that has relatively few features in common with
watched show.

47. (Currently Amended) ~~The at least one medium of claim 26~~At least one medium readable by a data processing device and embodying software arranged to perform the following operations:

calculating a probability that a television program is a
5 desired one, based on a viewer profile and data regarding the
television program; and

supplying a recommendation regarding the television
program based on the probability,

wherein

10 the viewer profile comprises a list of features types and
values for such feature types;
the feature types are selected from at least two sets,
including
a first set of feature types whose values are deemed non-
15 independent; and
a second set of feature types whose values are deemed
independent; and
calculating a probability comprises
applying a Bayesian classifier calculation corresponding
20 to feature types from the second set; and
applying a modified Bayesian classifier calculation
corresponding to feature types from the first set.

48. (Original) The at least one medium of claim 47, wherein with
respect to features of the first set, the modified Bayesian
25 classifier calculation considers only values that match with a show
being classified.

49-50. (Cancelled).

51. (Currently Amended) A data processing method comprising
performing the following operations in a data processing device:
- first receiving data reflecting physical observations,
which data includes a list of feature values and observations about

- 5 feature values, some of which feature values are independent and some of which are not;
- second receiving data about an item to be classified, the data about the item to be classified including feature values;
 - maintaining a division of the data reflecting physical observations into at least two sets, including
 - a first set including those feature values which are deemed not independent; and
 - a second set including those feature values which are deemed independent;
 - 15 - performing a probabilistic calculation on the data reflecting physical observations and the data regarding an item to be classified including:
 - applying a Bayesian classifier calculation with respect to feature values relating to the second set; and
 - 20 - applying a modified Bayesian classifier calculation with respect to feature values relating to the first set
 - presenting a conclusion regarding the item to be classified to a user based on the probabilistic calculation.

52. (Original) The method of claim 51, wherein the modified Bayesian classifier calculation comprises ignoring feature values from the data reflecting physical observations when those feature

values are not present in the data regarding the item to be

5 classified.